

Coastal Hazards – Risk Assessment and Hazard Mitigation

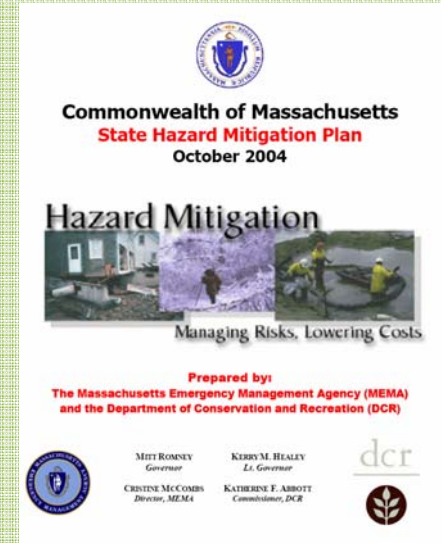
Richard Zingarelli
State NFIP Coordinator and
Acting State Hazard Mitigation Officer



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State Hazard Mitigation Plan Outline

1. Foreword
 2. Executive Summary
 3. The Planning Process
 4. State Risk Assessment
 5. Statewide Hazard Mitigation Strategy
 6. Regional & Local Planning Coordination
 7. Plan Maintenance Process
- Appendices



What is Hazard Mitigation?

"Any sustained action taken to reduce or eliminate long-term risk to people and property from hazards and their effects."



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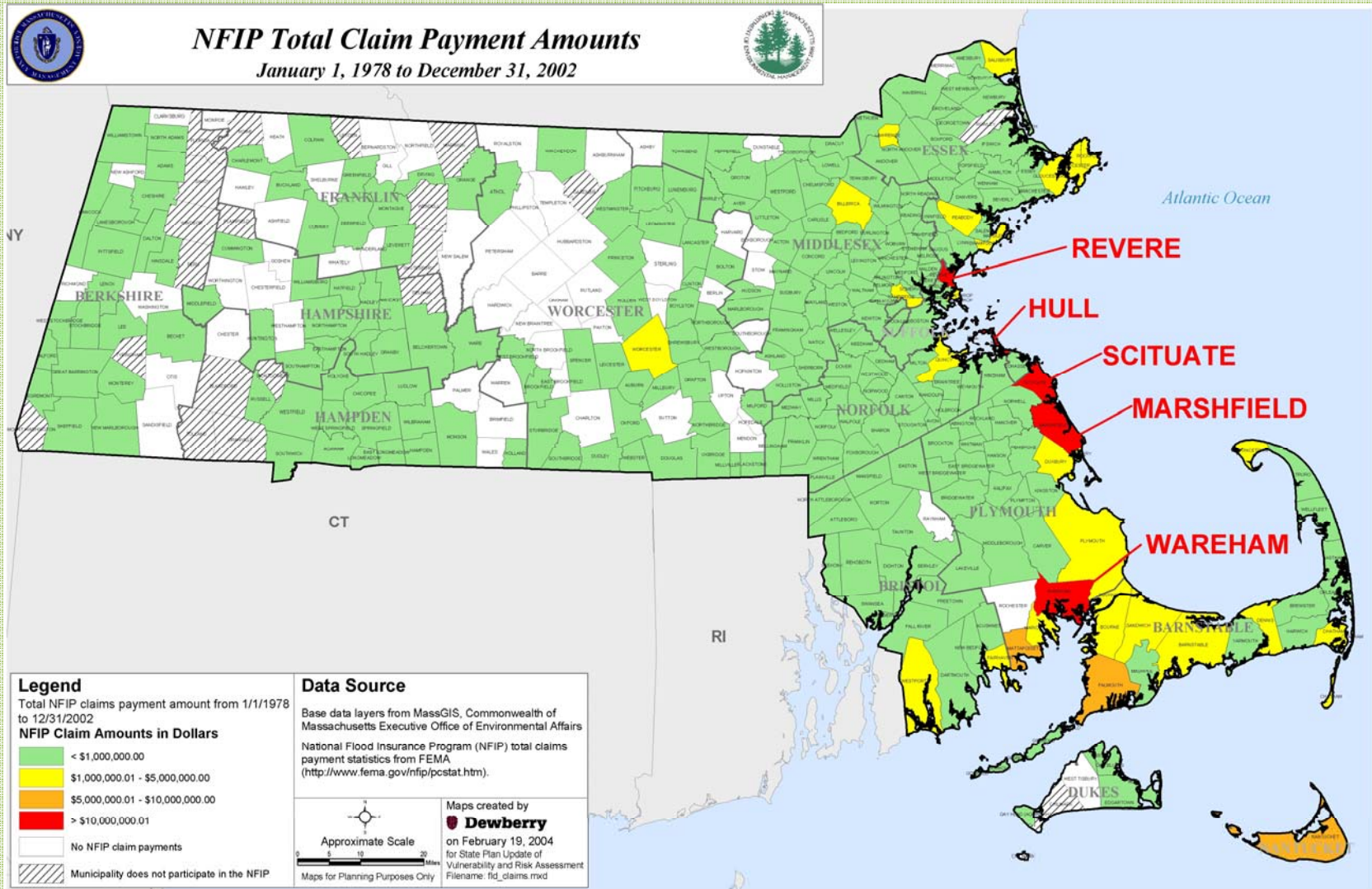
Natural Hazard Vulnerability

Hazard	Frequency				Severity			
<i>Flood</i>	Very Low	Low	Medium	High	Minor	Serious	Extensive	Catastrophic
<i>Dam Failure</i>	Very Low	Low	Medium	High	Minor	Serious	Extensive	Catastrophic
<i>Coastal Storms</i>	Very Low	Low	Medium	High	Minor	Serious	Extensive	Catastrophic
<i>Coastal Erosion</i>	Very Low	Low	Medium	High	Minor	Serious	Extensive	Catastrophic
<i>Hurricanes & Tropical Storms</i>	Very Low	Low	Medium	High	Minor	Serious	Extensive	Catastrophic
<i>Severe Storms (wind, hail, lightning)</i>	Very Low	Low	Medium	High	Minor	Serious	Extensive	Catastrophic
<i>Tornados</i>	Very Low	Low	Medium	High	Minor	Serious	Extensive	Catastrophic
<i>Severe Winter Weather (wind, snow, ice)</i>	Very Low	Low	Medium	High	Minor	Serious	Extensive	Catastrophic
<i>Drought</i>	Very Low	Low	Medium	High	Minor	Serious	Extensive	Catastrophic
<i>Fire (wild)</i>	Very Low	Low	Medium	High	Minor	Serious	Extensive	Catastrophic
<i>Earthquake</i>	Very Low	Low	Medium	High	Minor	Serious	Extensive	Catastrophic
<i>Landslide</i>	Very Low	Low	Medium	High	Minor	Serious	Extensive	Catastrophic



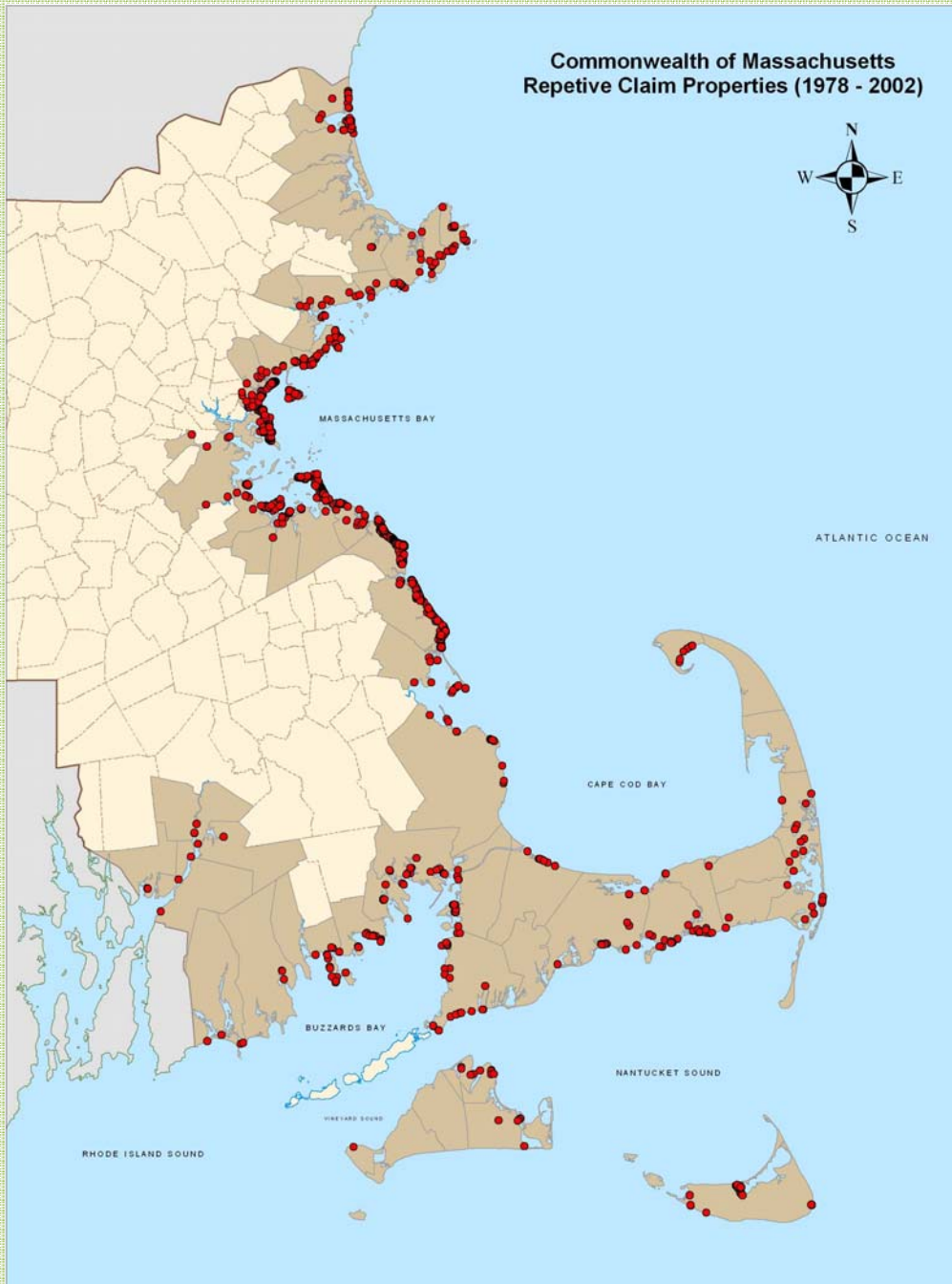
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Flood Insurance Claims

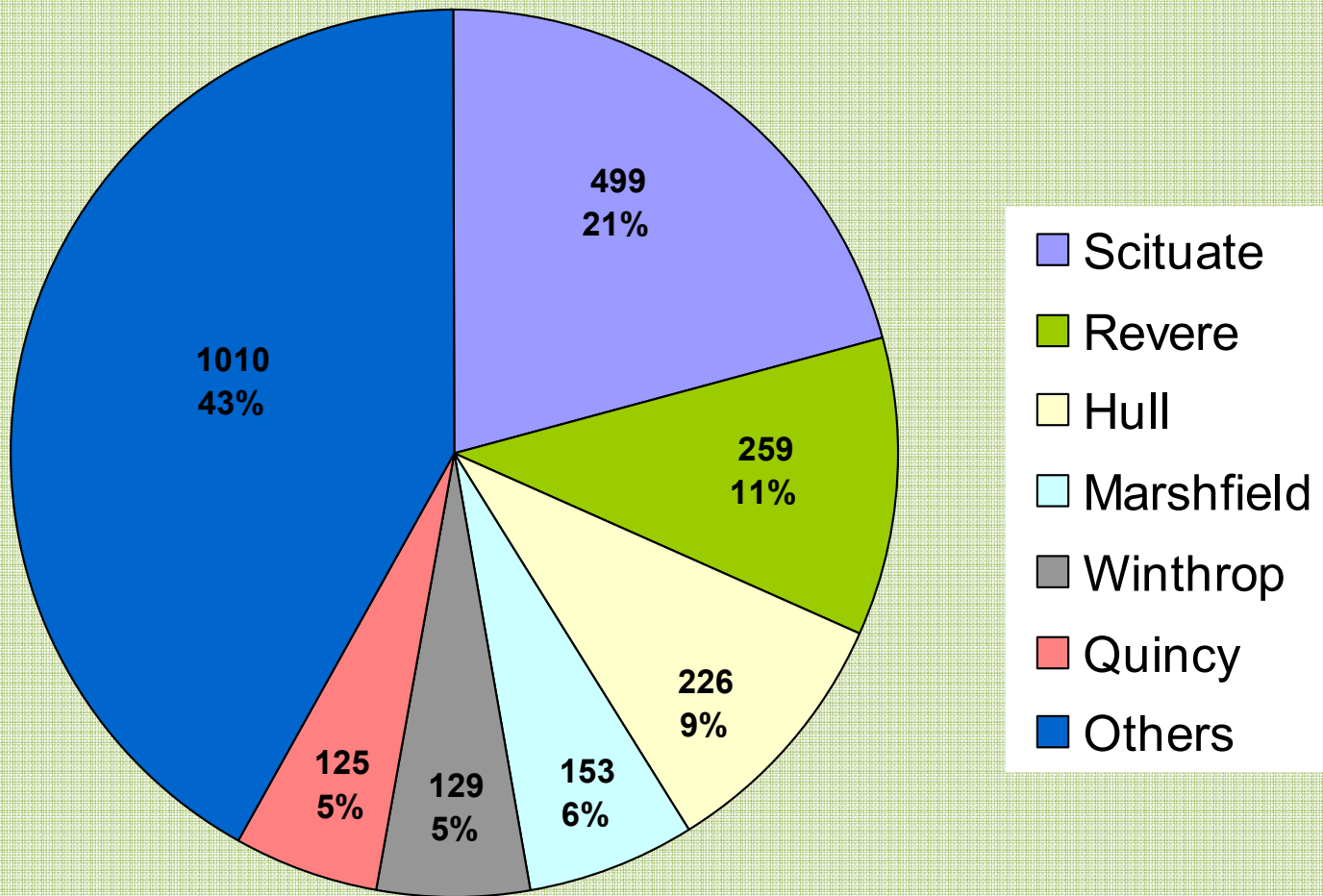


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Commonwealth of Massachusetts
Repetitive Claim Properties (1978 - 2002)

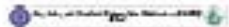


Repetitive Claim Properties



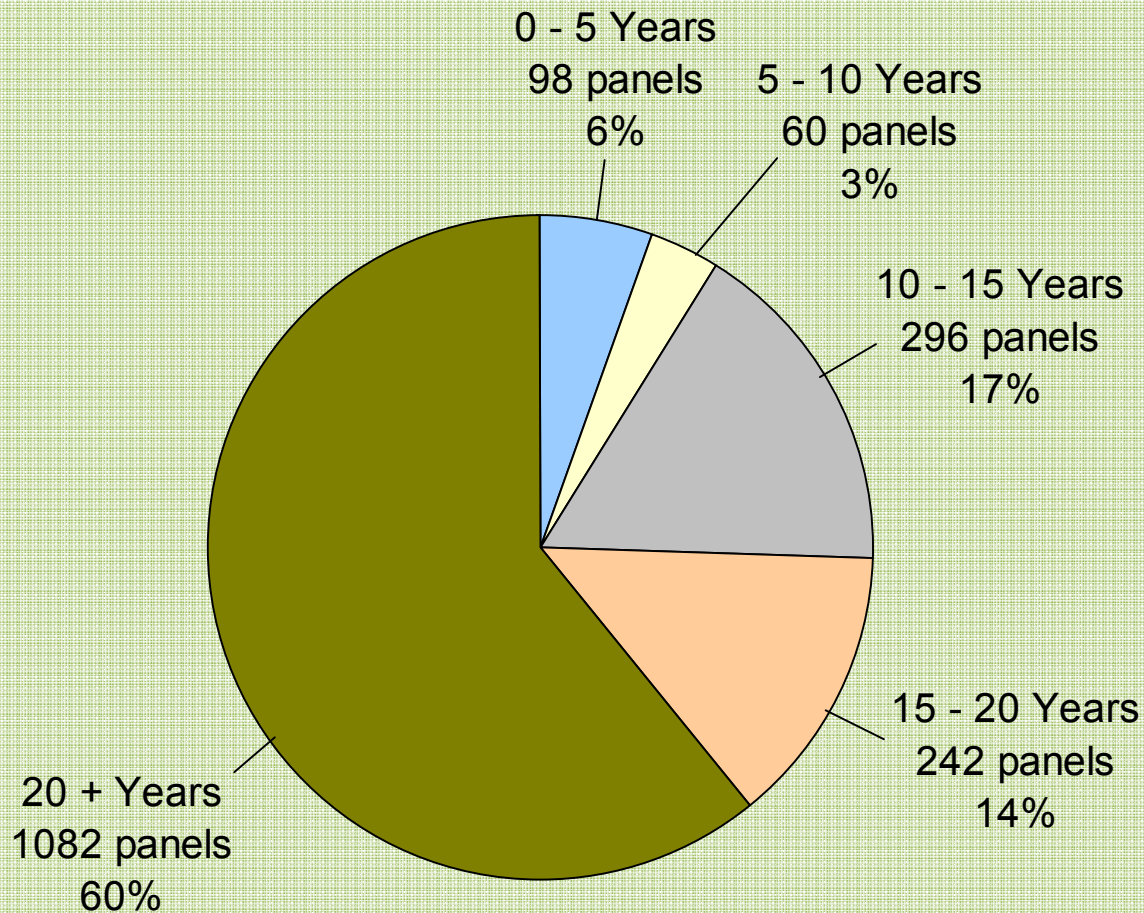
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CATEGORY 1
HURRICANE INUNDATION AREAS
SALISBURY



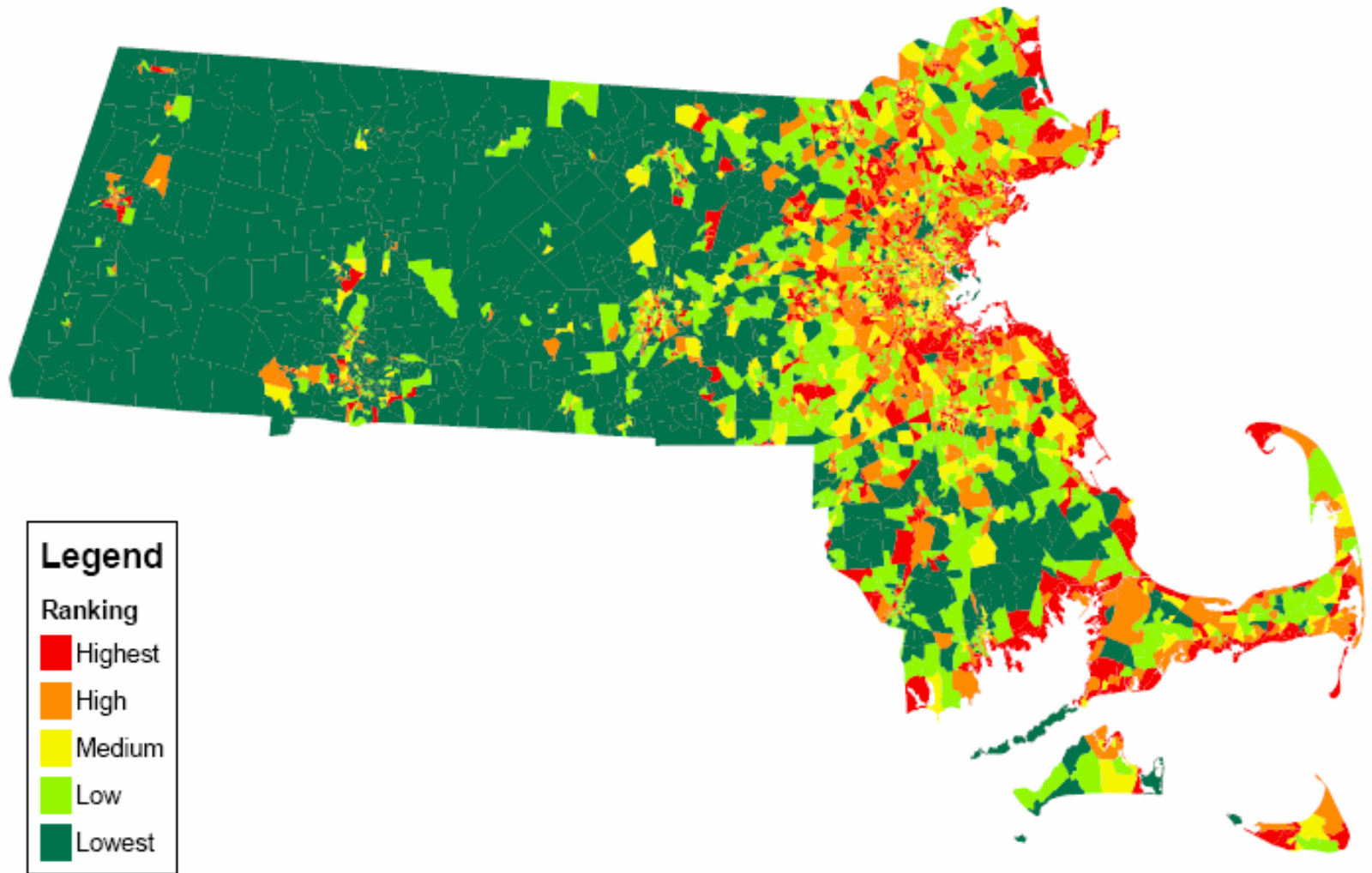
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Age of Map Inventory



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FEMA Map Revision Priorities



State Agency-Owned Buildings At Risk of Flooding

State Agency	Total Buildings	High Risk	Medium Risk	Total in Hazard Areas	Replacement Value of Structures in Hazard Areas
Dept. of Conservation & Recreation	1532	21	126	137	\$127 million
Massachusetts Highway Department	751	3	33	36	\$9 million
Massachusetts Maritime Academy	21	10	10	20	\$49 million
All other state agencies	3670	0	77	77	\$227 million
Grand Total	5974	34	246	280	\$412 million



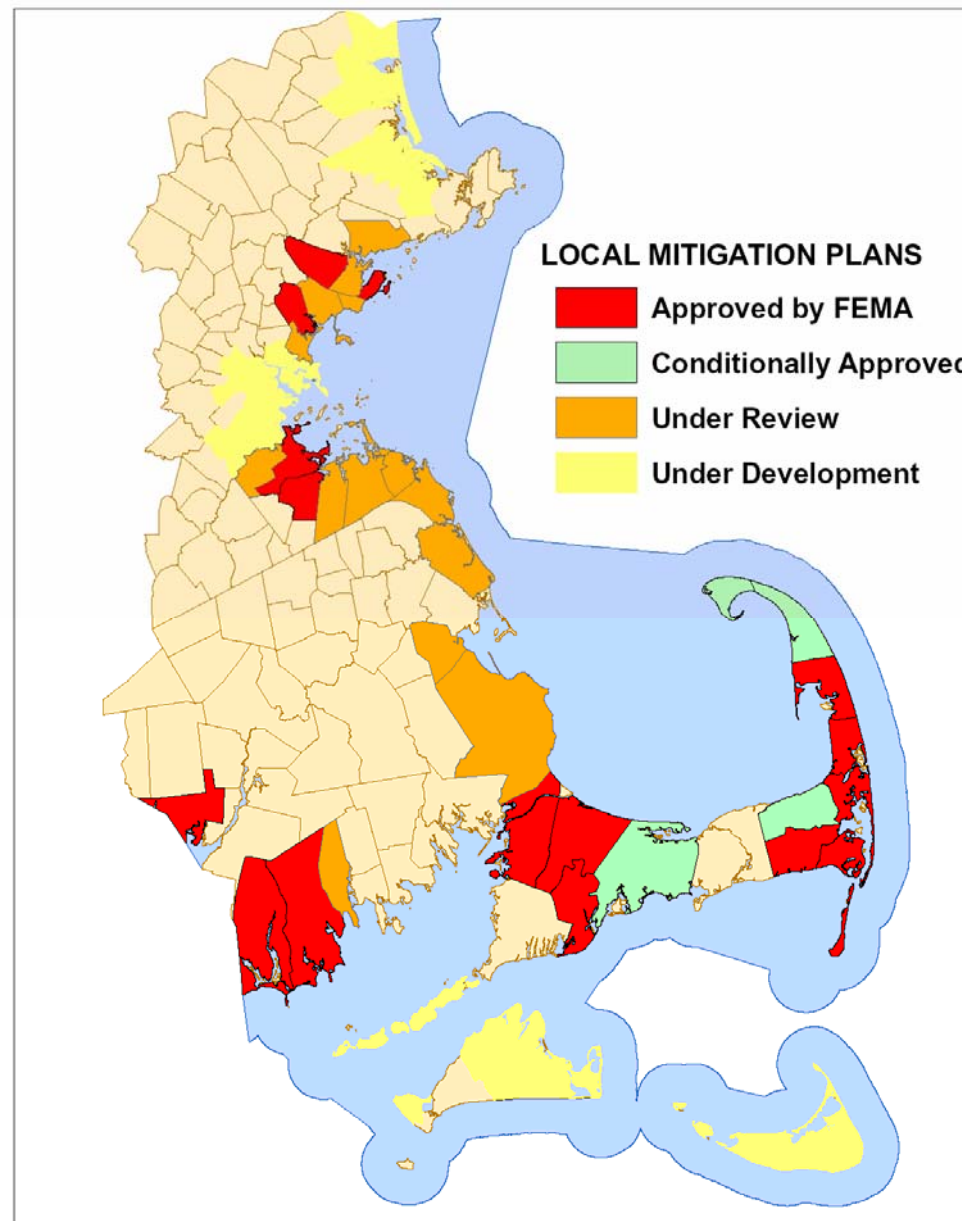
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State Agency-Owned Buildings Within SLOSH Zones

Agency	Total Buildings	Medium Risk	Low Risk	Replacement Value of Structures in Hazard Areas
Dept. of Conservation & Recreation	1532	118	24	\$139 million
Fisheries Wildlife & Environmental Law Enforcement	155	16	0	\$3.9 million
Massachusetts Highway Department	751	26	3	\$32 million
Massachusetts Maritime Academy	21	20	0	\$50 million
Salem State College	35	7	10	\$80 million
University of Massachusetts	497	17	4	\$25 million
All other agencies	2983	52	12	\$1.4 billion
Grand Total	5974	256	53	\$1.8 billion



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Grant Programs for Hazard Mitigation Activities



- Pre-Disaster Mitigation Program (PDM)



- Hazard Mitigation Grant Program (HMGP)



- Flood Mitigation Assistance (FMA) Program

Total of \$25 million over last 15 years



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